portUp™

8-Port Ethernet Card

User's Guide

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1 Introduction

Welcome to the *portUp*™ *Installation and User's Guide.* This guide contains information about the installation and use of portUp, Continuous Computing Corporation's 8-Port Ethernet card for CompactPCI.

This guide includes the following information related to portUp:

- Description of features
- Unpacking, installing, and starting up
- Software configuration
- Troubleshooting and servicing
- Connectors, pinouts, LEDs, and specifications

Description

PortUp provides 8 ports of full-duplex 10/100 Mbps Fast Ethernet on a single-slot, 6U Full Hot Swap CompactPCI board.

Features of portUp include:

- **CompactPCI Form Factor**
  Designed according to the PICMG 2.0 R3.0 CompactPCI specification, portUp supports 32- and 64-bit 33MHz PCI busses.

- **Full Hot Swap Board**
  As a Full Hot Swap device, portUp can be inserted into and removed from a live system without risk of damage to the hardware per the PICMG 2.1 R1.0 Hot Swap specification.

- **Flexible Port Access**
  Port access is available via the front board, transition board, or at the midplane. A custom-designed Continuous Computing midplane allows your system to run the portUp front card without the need for a transition board, enabling the creation of 12-inch-deep systems.

- **High Performance**
  Intelligent Ethernet packet processors support high bandwidth I/O while minimizing load on the host processor.

- **Device Driver**
  The portUp device driver runs on Solaris 2.7 and 2.8, and is fully compatible with DLPI and built-in Solaris Ethernet drivers. Other drivers are available by request.

- **PCI-to-PCI Bridge**
  PortUp incorporates a PCI to local PCI bridge to allow communication with the PCI bus. The bridge is non-transparent and presents the board subsystem as a single device to your host processor.

- **Front and Rear Indicators**
  Connection status and activity can be monitored via LEDs on both the front card and transition board.

Using This Guide

This guide is written for computer technicians and hardware and software engineers.

It is assumed that the user of portUp is familiar with:

- The handling of ESD-sensitive electronic equipment
- The Solaris operating system

Definitions of Terms

portUp	Refers to the larger card installed in the front of the system. PortUp also refers to both the front and transition cards as a unit.
Transition Card/Board	Refers to the smaller I/O card installed at the back of the system.
Basic Hot Swap	The board is powered and enabled for access by the PCI bus in configuration space only upon insertion. The board's configuration space is not yet initialized. You must initiate software connection at the system console.
Full Hot Swap	Adds to Basic Hot Swap by connecting the hardware and then the software automatically. The hardware connection layer asserts ENUM# (the signal that drives service requests to the system host) and the system software responds by configuring the system software.

Typographic Conventions

A summary of the typographic conventions used in this guide is listed in Table 1.

Typeface/Symbol	Meaning	Example
`AaBbCc123`	The names of commands, files and directories; on-screen computer output	Edit your `.login` file. At the `ok` prompt….
`AaBbCc123`	What you type, contrasted with on-screen computer output	To turn the unit on, type **`on`** at the `ccpu>` prompt. i.e., `ccpu>:`**`on`**
<***`AaBbCc123`***>	Command-line placeholder or token to be replaced with a real name or value (do not type brackets)	To delete a file, type **`rm`** <***`filename`***>.
[**`AaBbCc123`**]	Optional argument (do not type brackets)	[**`help`**] **`dir`** [<***`filename`***>]
{<***`a`***> <***`b`***>}	Required argument (do not type brackets)	{<***`na`***> <***`cmd`***>} **`grade`** {**`a`**, **`b`**, **`c`**, **`d`**, **`f`**}
`|`	The vertical bar (“or”) separates two or more commands, of which only one is required.	**`{start | stop}`** **`{a | b | c}`**
AaBbCc123	Book titles, new words or terms, or words to be emphasized	• This manual is used in conjunction with the *SPARCengine CP1500 User’s Manual.* • You *must* be grounded to avoid ESD damage to the equipment.
ABC	Acronyms	Locate the On / Off toggle switch on the CCN front panel.
`Ctrl`	Keystroke press	Send a break using **`Ctrl-]`**. (**Note:** Hold down the **`Ctrl`** key and then press **`]`**. *Do not include the hyphen*).
	Caution	Failure to heed the instructions that follow the Caution symbol may result in damage to the equipment.

Table 1 Typographic conventions

Block Diagram

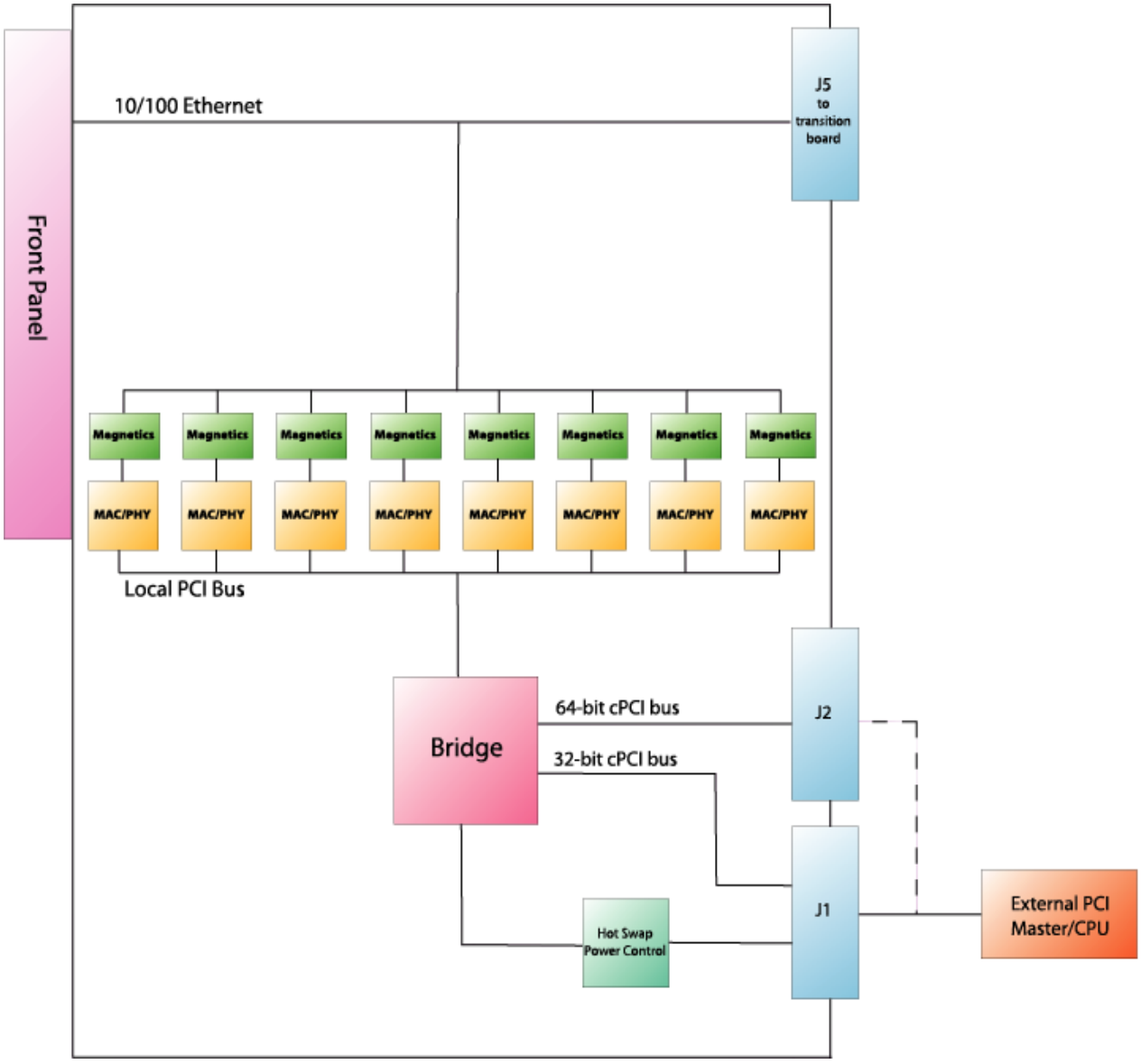


Figure 1 **portUp block diagram**

Photo

Figure 2 portUp's front (left) and transition (right) cards

Panels

For complete descriptions of the functions of the LEDs and push buttons, refer to "LEDs" in Section 5.

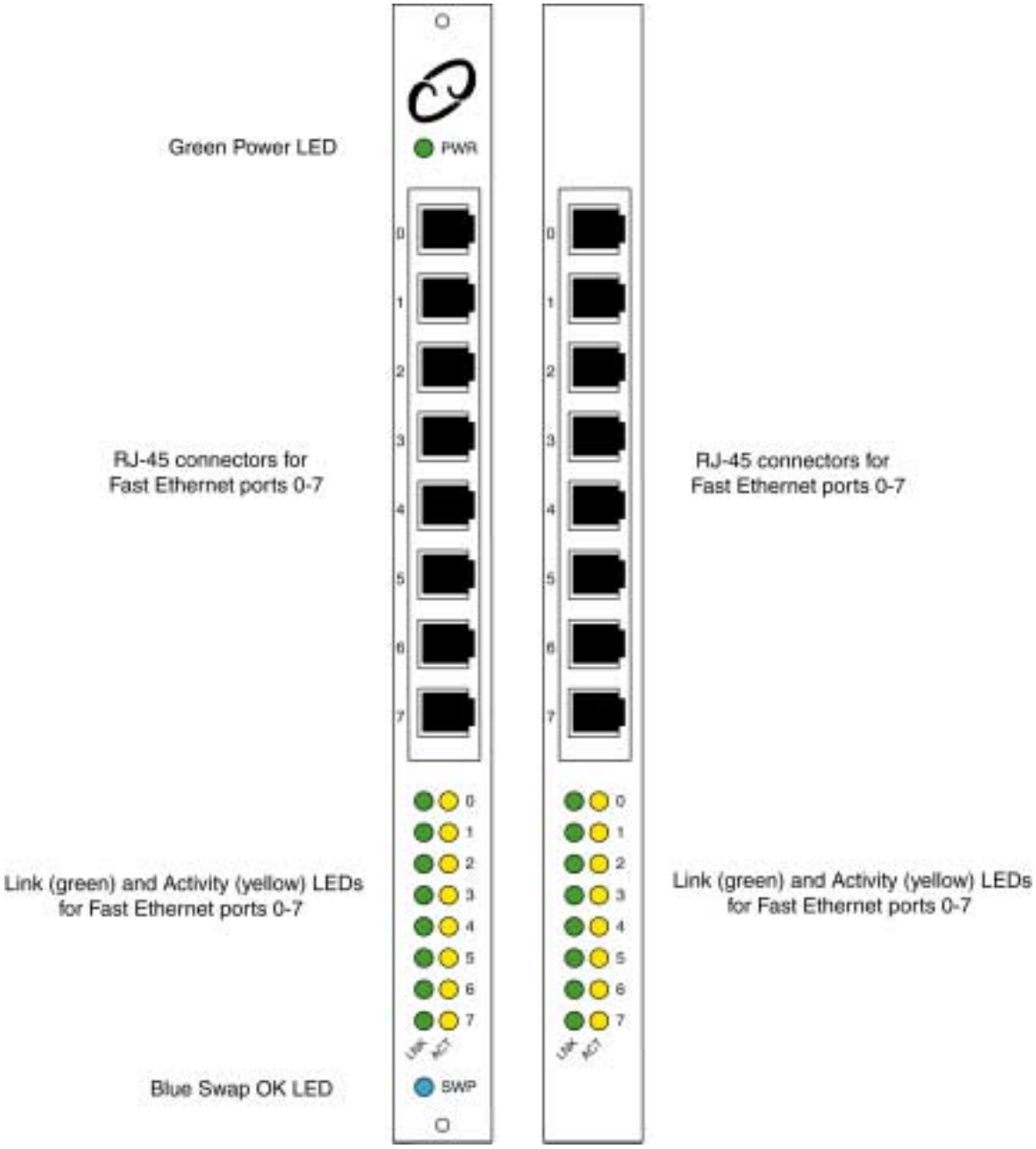


Figure 3 portUp's front (left) and rear (right) panels

2 Unpacking, Installing, and Starting Up

Electrostatic Discharge (ESD)

⚠ Caution – portUp contains electronic components that are extremely sensitive to static electricity. Ordinary amounts of static from clothing and the surrounding environment may destroy components.

What to do

- Use an antistatic mat.
- Use an antistatic wrist or foot strap.

Storage

- If portUp is to be stored before unpacking, see Table 11 for environmental storage specifications.

Unpacking

⚠ Caution – Always maintain an ESD-safe environment when handling portUp. It contains many components that can be destroyed by ESD.

- Inspect the shipping container for any in-transit damage and report it to shipping agent if necessary.
- Carefully unpack portUp from its shipping container.

Powering Down

1. Ensure that the system's OS has been shut down. In Solaris, do this using the **`halt`** command. You should then see the `ok` prompt.
2. Power down the system.

Installing portUp

⚠ Caution – You cannot install an I/O card in the slot designated for a CPU card, or vice-versa.

1. Slide the card into its slot in the system chassis. As the card's ejector latches engage the chassis, apply forward pressure while pushing the ejector latch handles toward each other. This procedure applies to both portUp's front and transition cards. See Figure 4 for an illustration of card installation and removal.
2. When properly installed, the connectors of each card will be fully engaged with the chassis' midplane. PortUp's front panel will sit flush with the front panels of the other cards.
3. Install and tighten the captive screws supplied with portUp on each ejector latch handle to secure each card to the system chassis.

Note: To remove portUp, refer to "Removing portUp from the chassis" in Section 4.

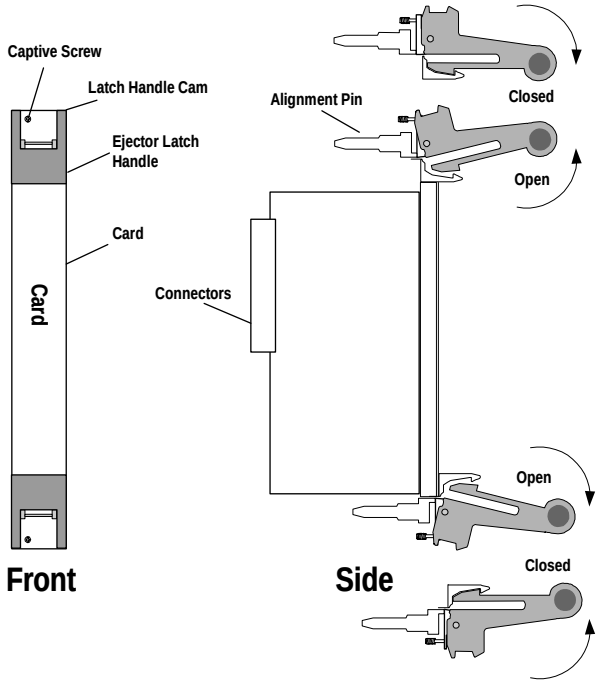


Figure 4 Card installation and removal

Connecting the Ethernet Networks

- Connect either the front or rear panel Ethernet ports with RJ45 Standard CAT5 twisted-pair cables. For the pinout for these connectors, refer to Figure 6.

Powering Up

After you have installed portUp's front and transition cards:

1. Power on the system.
2. Connect to the host CPU.
3. Start the OS with a reconfiguration boot (at the `ok` prompt **`boot -r`**) (at the Solaris # prompt **`reboot -- -r`**). This may take a few minutes.
4. Log in to the system.

3 Software Configuration

PortUp Device Driver

If you have purchased portUp as a standalone product not already installed in a Continuous Computing cPCI system, you will need a device driver to operate portUp in the Solaris environment. The driver is available for Solaris versions 7 and 8 for SPARC platforms and is supplied in Sun package format, compatible with the **pkgadd** command. The driver is supplied by Continuous Computing Corporation in one of the following forms:

- Web site download (http://www.ccpu.com)
- CD-ROM supplied with portUp
- Email from CCPU Technical Support (refer to Section 6 for contact information)

The portUp driver package name is `CCPUcoe.pkg`. This driver supports `kstat` and `ndd` for reading status information, and `ndd` for configuring. For more information about `kstat` and `ndd`, see their manual pages.

Installing the Driver

Install the package

Step	Description	Command
1.	At the root shell prompt, go to the driver folder.	**cd <*location*>**
2.	List the files of the folder. You will see the `CCPUcoe<`*`version`*`>.pkg` package file.	**ls**

3.	Install the package.
	Your screen will then display information similar to the following:
	`yoursys` **`pkgadd -d CCPUcoe<`*`version`*`>.pkg all`**
	`Processing package instance <CCPUcoe> from </mnt/sun/CCPUcoe/pkg/CCPUcoe.pkg>`
	`PortUp`
	`(sparc) CCPU PortUp Driver (coe) ($Name:  $)`
	`Copyright 2001 Continuous Computing Corp, all rights reserved.`
	`CONTINUOUS COMPUTING MAKES NO REPRESENTATIONS OR WARRANTIES ABOUT THE SUITABILITY OF THE SOFTWARE, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. CONTINUOUS COMPUTING SHALL NOT BE LIABLE FOR ANY DAMAGES SUFFERED BY LICENSEE AS A RESULT OF USING, MODIFYING OR DISTRIBUTING THIS SOFTWARE OR ITS DERIVATIVES.`
		pkgadd –d CCPUcoe<*version*>.pkg all

Configure the Ethernet interfaces

As shown below, you will be asked how you wish to configure your Ethernet interfaces:

```
This installation can configure your Ethernet interfaces (coe0 to coe7) to
automatically initialize at startup.
Do you wish to configure Ethernet interfaces? (y or n) [y]
```

You have the option of configuring the Ethernet interfaces so that they automatically initialize at startup or assigning hostnames to each interface. Procedures for both are provided below.

Initializing interfaces automatically at startup

Step	Description	Command
1.	After the package has been added, you will be asked if you want to configure the Ethernet interfaces. Answering yes (**y**), will configure the interfaces to automatically initialize at startup.	**y**
2.	You will be asked what name you want to associate with each port beginning with port 0. You can either: • associate names with each port by typing your desired name, in which case a `/etc/hostname.coe<x>` file is created containing the name of the interface you specified (an example is provided at right), ***or*** • choose "none", in which case no files will be created. Go to the "Manually assigning hostnames to interfaces" procedure below to continue.	**mysys-coe3**
3.	After the ports have been associated, you will be asked if you want to continue with the installation of the package. When prompted, type **y** to continue.	**y**

4.	Installation of the driver is complete when you see the following message:
	`Installation of <CCPUcoe> was successful.`
	Verify the installation. You will see information similar to that below:
	`root yoursys /mnt/sun/CCPUcoe/pkg) pkginfo -l CCPUcoe`
	`PKGINST: CCPUcoe`
	`NAME: PortUp`
	`CATEGORY: system,utilities`
	`ARCH: sparc`
	`VERSION: CCPU PortUp Driver (coe) ($Name: $)`
	`VENDOR: Continuous Computing Corporation`
	`DESC: CCPU PortUp Ethernet Driver`
	`PSTAMP: sv.011203190322`
	`INSTDATE: Dec 11 2001 17:13`
	`HOTLINE: 1-858-882-8911`
	`EMAIL: support@ccpu.com`
	`STATUS: completely installed`
	`FILES: 7 installed pathnames`
	`3 shared pathnames`
	`3 directories`
	`4 executables`
	`448 blocks used (approx)`
		pkginfo –l CCPUcoe

5.	Once the package installation is verified, you'll need to associate IP addresses to each host name by editing the `/etc/hosts` file. A sample entry is provided at right. **Note:** If you are using NIS, NIS+, or DNS, then assign the IP addresses and names as appropriate.	**`172.18.33.51  mysys-coe3`**
6.	To begin using portUp, you can either: • reboot the system, ***or*** • bring up each port as desired; to do so an example command is provided at right.	**`ifconfig coe3 plumb mysys-coe3 up`**

Table 2 Initializing interfaces automatically at startup

Manually assigning hostnames to interfaces

Step	Description	Command

1.	To manually assign hostnames to each interface, answer no to the following on-screen question:
	`This installation can configure your Ethernet interfaces (coe0 to coe7) to automatically initialize at startup.`
	`Do you wish to configure Ethernet interfaces? (y or n) [y]`
		`n`

2.	After the ports have been associated, verify the package installation. You will see information similar to that below:
	`root yoursys /mnt/sun/CCPUcoe/pkg) pkginfo -l CCPUcoe`
	`PKGINST: CCPUcoe`
	`NAME: PortUp`
	`CATEGORY: system,utilities`
	`ARCH: sparc`
	`VERSION: CCPU PortUp Driver (coe) ($Name: $)`
	`VENDOR: Continuous Computing Corporation`
	`DESC: CCPU PortUp Ethernet Driver`
	`PSTAMP: sv.011203190322`
	`INSTDATE: Dec 11 2001 17:13`
	`HOTLINE: 1-858-882-8911`
	`EMAIL: support@ccpu.com`
	`STATUS: completely installed`
	`FILES: 7 installed pathnames`
	`3 shared pathnames`
	`3 directories`
	`4 executables`
	`448 blocks used (approx)`
		`pkginfo –l CCPUcoe`

3.	Once the package installation is verified, you'll need to associate IP addresses to each port by editing the files you created in Step 2 above. A sample entry is provided at right. **Note:** If you are using NIS, NIS+, or DNS, then assign the IP addresses and names as appropriate.	**`172.18.33.51  mysys-coe3`**
4.	Create files for each interface you will use. The file must contain the desired hostname for the specified interface. For simplicity and usability, we recommend your naming scheme incorporate the extension `coe`*x*, where *x* is the number of the port, for example, **`mysys-coe3`**.	**`echo mysys-coe3 > /etc/hostname.coe3`**

5.	To begin using portUp, you can either: • reboot the system, ***or*** • bring up each port as desired; to do so an example command is provided at right.	**`ifconfig coe3 plumb mysys-coe3 up`**

Table 3 Manually assigning hostnames to interfaces

Manually Starting a Port

To manually start up a port, you'll need to associate the IP address with the specified port. An example is provided below.

```
root yoursys /mnt/sun/CCPUcoe) ifconfig coe0 plumb 172.18.33.52 netmask 255.255.0.0 up
Dec 11 17:20:02 h5r coe: NOTICE: coe0: link is now UP, at 100Mbps Full-Duplex
```

Refer to the `ifconfig` manual page for additional information.

4 Troubleshooting and Servicing

This section describes techniques for analyzing any problems you may have installing or configuring portUp.

Before You Begin

In the event that portUp should fail in any way, first ensure that:

- The front and transition cards are seated at the midplane.
- The external cables are properly connected.

If the connectors are seated and the cables properly connected, perform the troubleshooting steps below in sequential order. If all of these fail, contact Continuous Computing's Technical Support (see Section 6 for contact information).

1. Ensure Solaris Recognition

Ensure that Solaris recognizes the portUp card physically. You can do this with the following command: **`prtconf -v | grep 6333`**. PortUp is identified by `pci6333,6538`. If you do not see this output, portUp is either not seated, the system has not been rebooted since portUp installation, or there is a bent pin or other hardware problem.

2. Ensure Driver Installation

Ensure the driver package is installed with the following command: **`pkginfo -l CCPUcoe`**. If the package is not installed, refer to Section 3 for the driver installation procedure.

The driver may be only partially installed, as indicated in the STATUS field of the **`pkginfo`** output. If so, remove the package with **`pkgrm`** and re-install the package. See Section 3 for instructions.

3. Ensure Driver Module Loaded

Ensure the driver module is loaded with the following command: **`modinfo | grep coe`**. If the module is loaded, you will see output similar to that shown below:

```
201 10237959   7df3 213   1  coe (CCPU PortUp Drv(coe)v1.0.0a0r06)
```

If you do not see this, but Solaris recognizes the card physically (refer to "Ensure Solaris Recognition" step above), contact Continuous Computing's Technical Support (refer to Section 6 for contact information).

4. Verify Devices are Plumbed

Verify the devices are plumbed with the following command: **`ifconfig -a`**. If portUp is plumbed, you will see "`coe`" output similar to that shown below:

```
coe0: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500 index 3
        inet 172.18.33.51 netmask ffff0000 broadcast 172.18.255.255
        ether 0:11:b0:0:69:0
```

If you see entries for portUp similar to that above:

1. Ensure that the correct IP address is associated with the proper port.
2. Ensure the first entry inside the "<" bracket is "UP".

If you do not see any "coe" entries:

1. **ifconfig coe<*n*> plumb**
2. **ifconfig –a**

If Step 1 returns errors, you may have moved portUp from one slot to another. If so, your devices may show up starting at coe8-15 or 16-23, and so on.

If portUp has never been installed in another slot and plumbing does not then yield anything from **ifconfig –a**, contact Continuous Computing's Technical Support (refer to Section 6 for contact information).

5. Check Link Status

Check the status of the link with the following command: **kstat –m coe –i <*n*>** (where **<*n*>** is the number of the port). You will see output similar to that shown below.

Table 4, Table 5, and Table 6 explain the useful values of this output; the useful values are indicated by a "*" in the left margin of the output below.

Cross-check the link and activity LEDs against the link status output shown below. Note that portUp supports ndd for the getting and setting of parameters. See the manual page for ndd for more information.

```
root mysys /mnt/sun/CCPUcoe/pkg) kstat -m coe -i 0
module: coe                             instance: 0
name:   coe0                            class:    net
        100fdx_cap                      1
        100hdx_cap                      1
        10fdx_cap                       1
        10hdx_cap                       1
        adv_100fdx_cap                  1
        adv_100hdx_cap                  1
        adv_10fdx_cap                   1
        adv_10hdx_cap                   1
        adv_autoneg_cap                 1
        allocbfail                      0
        autoneg_cap                     1
        collisions                      0
        crtime                          230.376233985
        ierrors                         0
        ifs1                            60
        ipackets                        1360892
        ipg                             96
*        linkmode                        4
*        linkspeed                       1
*        linkstatus                      1
        lp_100fdx_cap                   1
        lp_100hdx_cap                   1
        lp_10fdx_cap                    1
        lp_10hdx_cap                    1
        lp_autoneg_cap                  1
        memerror                        0
        missed                          0
```

```
nocanput                        0
nodescs                         0
odrops                          0
oerrors                         0
opackets                        1359255
snaptime                        1762.977247369
```

Useful Values of Link Status Output

`linkmode`

Value	Description
Non-zero	Full duplex
0	Half duplex

Table 4 `linkmode` **values**

`linkspeed`

Value	Description
1	100 mbit
0	10 mbit

Table 5 `linkspeed` **values**

`linkstatus`

Value	Description
1	Link up
0	Link down

Table 6 `linkstatus` **values**

6. Verify Correct IP Configuration

1. Ensure that the correct IP addresses are associated with the proper name in your `/etc/hosts` file.
2. Verify the names in `/etc/hostname.coe<`*n*`>` match the names in `/etc/hosts`.
3. Ensure the IP addresses and `netmasks` are set appropriately for your network.
4. Try another `coe` port.
5. Ensure the cable is plugged in.

7. All of the Above Fail

If all of the above troubleshooting methods fail, try swapping the suspect portUp with one that is known to work. Follow the procedure for removing portUp and its transition card below.

Removing portUp from the chassis

To remove portUp's front and transition cards, perform the following steps with each card:

1. Halt the operating system.
2. Remove power (if desired).
3. Disconnect any external cables.
4. Unscrew the captive screws located on the top and bottom of the faceplate.

5. Unlatch the top and bottom ejector handles by pressing them away from each other.
6. Gently slide the card from the chassis.
7. If you are replacing the card with a new one, use **`boot -r`** on your next boot to ensure the new configuration is recognized.

8. Contact Technical Support

If you continue to experience problems with portUp, contact the Technical Support team at Continuous Computing. See Section 6 for contact information.

5 Connectors, Pinouts, LEDs, and Specifications (Preliminary/Expected)

Connector Usage

Connector Usage	
J1	PCI
J2	PCI (64-bit only)
J3	Not used/Not installed
J4	Not used/Not installed
J5	10/100 Ethernet signals

Table 7 Connector usage

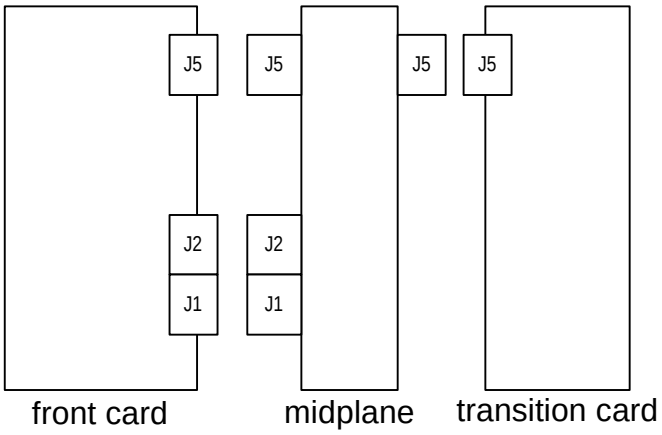


Figure 5 Connectors

Pin Assignments

Legend:

- MM*x*_TDP: 10/100Mb TX+ signal
- MM*x*_TDN: 10/100Mb TX- signal
- MM*x*_RDP: 10/100Mb RX+ signal
- MM*x*_RDN: 10/100Mb RX- signal
- GA*x*: geographical address signals
- NC: no connect

All other signals are as defined by CompactPCI specifications.

J5/P5 connector

Pin#	Signal Name	Pin#	Signal Name	Pin#	Signal Name	Pin#	Signal Name	Pin#	Signal Name
22A	JTAG_TDI	22B	JTAG_TDO	22C	JTAG_TCK	22D	TJAG_TMS	22E	JTAG_TRST#
21A	FGND	21B	FGND	21C	FGND	21D	FGND	21E	FGND
20A	TX-0	20B	FGND	20C	RX-0	20D	FGND	20E	TX-1
19A	TX+0	19B	FGND	19C	RX+0	19D	FGND	19E	TX+1
18A	FGND	18B	TX-2	18C	FGND	18D	RX-1	18E	FGND
17A	FGND	17B	TX+2	17C	FGND	17D	RX+1	17E	FGND
16A	RX-2	16B	FGND	16C	TX-3	16D	FGND	16E	RX-3
15A	RX+2	15B	FGND	15C	TX+3	15D	FGND	15E	RX+3
14A	FGND	14B	TX-4	14C	FGND	14D	RX-4	14E	GND
13A	FGND	13B	TX+4	13C	FGND	13D	RX+4	13E	GND
12A	TX-5	12B	FGND	12C	RX-5	12D	FGND	12E	TX-6
11A	TX+5	11B	FGND	11C	RX+5	11D	FGND	11E	TX+6
10A	FGND	10B	TX-7	10C	FGND	10D	RX-6	10E	FGND
9A	FGND	9B	TX+7	9C	FGND	9D	RX+6	9E	FGND
8A	RX-7	8B	FGND	8C	NC	8D	FGND	8E	NC
7A	RX+7	7B	FGND	7C	NC	7D	FGND	7E	NC
6A	DGND	6B	+5V	6C	DGND	6D	DGND	6E	DGND
5A	LINK_GRN0	5B	ACT_YEL0	5C	GND	5D	LINK_GRN1	5E	ACT_YEL1
4A	DGND	4B	LINK_GRN2	4C	ACT_YEL2	4D	DGND	4E	DGND
3A	LINK_GRN3	3B	ACT_YEL3	3C	DGND	3D	LINK_GRN4	3E	ACT_YEL4
2A	DGND	2B	LINK_GRN5	2C	ACT_YEL5	2D	DGND	2E	DGND
1A	LINK_GRN6	1B	ACT_YEL3	1C	DGND	1D	LINK_GRN7	1E	ACT_YEL7

Table 8 J5/P5 connector

J4/P4 connector (not populated)

J3/P3 connector (not populated)

J2/P2 connector

Pin#	Signal Name	Pin#	Signal Name	Pin#	Signal Name	Pin#	Signal Name	Pin#	Signal Name
22A	GA4	22B	GA3	22C	GA2	22D	GA1	22E	GA0
21A	RSV	21B	RSV	21C	RSV	21D	RSV	21E	RSV
20A	RSV	20B	RSV	20C	RSV	20D	RSV	20E	RSV
19A	RSV	19B	RSV	19C	RSV	19D	RSV	19E	RSV
18A	BRSVP2A18	18B	BRSVP2B18	18C	BRSVP2C18	18D	DGND	18E	BRSVP2E18
17A	BRSVP2A17	17B	DGND	17C	RSV	17D	RSV	17E	RSV
16A	BRSVP2A16	16B	BRSVP2B16	16C	RSV	16D	DGND	16E	BRSVP2E16
15A	BRSVP2A15	15B	GND	15C	RSV	15D	RSV	15E	RSV
14A	AD35	14B	AD34	14C	AD33	14D	DGND	14E	AD32
13A	AD38	13B	DGND	13C	EARLYIO	13D	AD37	13E	AD36
12A	AD42	12B	AD41	12C	AD40	12D	DGND	12E	AD39
11A	AD45	11B	DGND	11C	EARLYIO	11D	AD44	11E	AD43
10A	AD49	10B	AD48	10C	AD47	10D	DGND	10E	AD46
9A	AD52	9B	DGND	9C	EARLYIO	9D	AD51	9E	AD50
8A	AD56	8B	AD55	8C	AD54	8D	DGND	8E	AD53
7A	AD59	7B	DGND	7C	EARLYIO	7D	AD58	7E	AD57
6A	AD63	6B	AD63	6C	AD61	6D	DGND	6E	AD60

5A	C/BE5#	5B	DGND	5C	EARLYIO	5D	C/BE4#	5E	PAR64
4A	EARLYIO	4B	BRSVP2B4	4C	C/BE7#	4D	DGND	4E	C/BE6#
3A	RSV	3B	DGND	3C	RSV	3D	RSV	3E	RSV
2A	RSV	2B	RSV	2C	UNC	2D	RSV	2E	RSV
1A	RSV	1B	DGND	1C	RSV	1D	RSV	1E	RSV

Table 9 J2/P2 connector

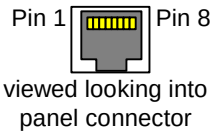
J1/P1 connector

Pin#	Signal Name	Pin#	Signal Name	Pin#	Signal Name	Pin#	Signal Name	Pin#	Signal Name
25A	EARLY_5V	25B	REQ64#	25C	ENUM#	25D	EARLY_3.3V	25E	EARLY_5V
24A	AD1	24B	EARLY_5V	24C	LONG_I/O	24D	AD0	24E	ACK64#
23A	EARLY_3.3V	23B	AD4	23C	AD3	23D	LONG_5V	23E	AD2
22A	AD7	22B	GND	22C	LONG_3.3V	22D	AD6	22E	AD5
21A	EARLY_3.3V	21B	AD9	21C	AD8	21D	M66EN	21E	C/BE0#
20A	AD12	20B	GND	20C	EARLY_I/O	20D	AD11	20E	AD10
19A	EARLY_3.3V	19B	AD15	19C	AD14	19D	GND	19E	AD13
18A	SERR#	18B	GND	18C	EARLY_3.3V	18D	PAR	18E	C/BE1#
17A	EARLY_3.3V	17B	SDONE	17C	SBO#	17D	GND	17E	PERR#
16A	DEVSEL#	16B	GND	16C	EARLY_I/O	16D	STOP#	16E	LOCK#
15A	EARLY_3.3V	15B	FRAME#	15C	IRDY#	15D	BD_SEL#	15E	NC
12-14	KEY AREA								
11A	AD18	11B	AD17	11C	AD16	11D	GND	11E	C/BE2#
10A	AD21	10B	GND	10C	EARLY_3.3V	10D	AD20	10E	AD19
9A	C/BE3#	9B	IDSEL	9C	AD23	9D	GND	9E	AD22
8A	AD26	8B	GND	8C	EARLY_I/O	8D	AD25	8E	AD24
7A	AD30	7B	AD29	7C	AD28	7D	GND	7E	AD27
6A	REQ#	6B	GND	6C	LONG_3.3V	6D	CLK	6E	AD31
5A	BRSVP1A5	5B	BRSVP1B5	5C	RST#	5D	GND	5E	GNT#
4A	BRSVP1A4	4B	HEALTHY#	4C	LONG_I/O	4D	INTP	4E	INTS
3A	INTA#	3B	INTB#	3C	INTC#	3D	LONG_5V	3E	INTD#
2A	NC	2B	EARLY_5V	2C	NC	2D	NC	2E	NC
1A	EARLY_5V	1B	-12V	1C	TRST#	1D	+12V	1E	EARLY_5V

Table 10 J1/P2 connector

Pinout

Standard RJ45



Pin	Signal
1	TX+
2	TX-
3	RX+
4	No Connect
5	No Connect
6	RX-
7	No Connect
8	No Connect

Figure 6 Standard RJ45 pinout

LEDs

Front Panel

The Activity (ACT) LEDs

The yellow activity LEDs (ACT) are activated when traffic is flowing on the port.

The Link (LNK) LEDS

The green link LEDs (LNK) are activated when Ethernet connections are made to a host device.

The Power (PWR) LED

The green power LED (PWR) is activated when power is connected to the board, board select (BDSEL) is on, and RESET is off.

The Hot Swap (SWP) LED

The blue Hot Swap LED (SWP) is activated when the board is ready to pull from the system.

Rear Panel

The Activity (ACT) LEDs

The yellow activity LEDs (ACT) are activated when traffic is flowing on the port.

The Link (LNK) LEDS

The green link LEDs (LNK) are activated when Ethernet connections are made to a host device.

Specifications

Ports	
8 ports of full-duplex 10/100 Mbps Fast Ethernet	
LEDs and Connectors	
LEDs Front Panel Rear Panel	 8 100Base-TX Link LEDs (green) 8 100Base-TX Activity LEDs (yellow) Hot Swap LED (blue) Power LED (green) 8 100Base-TX Link LEDs (green) 8 100Base-TX Activity LEDs (yellow)
Connectors Front Panel (Optional) Rear Panel	 8 Standard RJ45 connectors
Operating Mechanical and Environmental	
Electrical	4A at 3.3V maximum power consumption 800mA at 5V maximum power consumption
Mechanical	CompactPCI 6U, 1 slot (4HP) 160mm x 233.35mm x 20mm
Temperature Humidity Altitude	5°C to 40°C (operating) -5% to 55%C (short-term) 20% to 30% relative humidity, noncondensing (operating) 5% to 90% relative humidity, noncondensing (short-term) 3000m
Storage/Transit Environmental	
Temperature Humidity Altitude	-40°C to 70°C less than 95% relative humidity, noncondensing 10000m
Safety Compliance	
UL/cUL1950 3rd Edition Recognized Component	
Electromagnetic Compatibility (EMC)	
FCC Class A	

Telco Compliance
Designed for Telcordia NEBS GR-63-CORE Level 3 Designed for Telcordia NEBS GR-1089-CORE Level 3
Marks
UL, cUL, CE

Table 11 Specifications

6 Technical Support

Before contacting the Technical Support team at Continuous Computing, be sure you have read Section 4, "Troubleshooting and Servicing," of this guide.

If you continue to experience problems with the PortUp, please contact the Technical Support team at Continuous Computing by any of the methods listed below.

Note: Please be sure to include the serial numbers for each affected module, system and/or part. In addition, we will need to know what version of Solaris (or other operating system) you are running, as well as the patch level, and any other significant software packages that are installed.

Contacting Technical Support

To contact the Technical Support team at Continuous Computing, do one of the following:

- Email us at support@ccpu.com
- Visit our support web site at http://support.ccpu.com
  (This site features our automatic technical support system. Create a new user profile. Then submit a new ticket at the "Welcome to SupportWizard" page. This process ensures that our team delivers a timely solution to any technical problem you have.)
- Call us at (858) 882-8911, 9:00 a.m. – 5:00 p.m. (PST)

Note: If you have a Gold or Platinum service contract, follow the contact instructions provided with your contract.